

Letter to the Editor

Does Sleep Play a Role in the Relationship Among Depression, Anxiety, and Mortality in Lung Transplanted Patients?

To the Editor:

We would like to congratulate Dr. Smith and colleagues for their elegant study, which included 132 lung transplant recipients who were followed for 6 months to assess psychosocial risk factors of mortality. The results showed that depression but not anxiety were associated with increased mortality following lung transplantation (1). Additionally, we would like to make some remarks about their study regarding an important confounding factor that was not assessed: sleep.

Sleep is fundamental for the consolidation and maintenance of physiological and psychological processes. Individuals with psychiatric disorders, such as depression, often present several sleep disorders, mainly insomnia (2). In turn, insomnia increases depression symptoms and poor mental health (3). The association among these factors was also found in transplanted patients (4).

Considering that mood factors and poor sleep interact in multiple ways (5), they could be involved in the decreased quality of life and premature mortality after lung transplantation. However, while there is an established association between sleep and mood in transplanted patients, causality is bidirectional. Thus, when dealing with transplanted recipients, immunosuppression condition and comorbidities may exacerbate depression symptoms, or *vice-versa* (6).

Thus, we believe that the assessment of sleep and its features would better clarify the predictors of mortality in the posttransplant patients of the study from Smith et al, due to evidence of the relationship between poor sleep, mood disorders, and mortality. There are many tools of easy implementation in clinical framework, such as Pittsburgh Sleep Quality Index questionnaire and the Epworth Sleepiness Scale, which are validated and able to assess sleep entirely. This analysis would significantly contribute to the recognition of sleep as a screening tool for patients with emotional and psychological risk, who may be more prone to graft rejection and mortality, thus improving

posttransplant recovery in a multidisciplinary approach for the patients.

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Disclosure

The authors of this manuscript have no conflicts of interest to disclose as described by the *American Journal of Transplantation*.

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